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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,723	09/12/2003	Sandip Datta Roy	60046.0062US01	8283

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HOPE BALDAUFF HARTMAN, LLC
1720 PEACHTREE STREET, N.W
SUITE 1010
ATLANTA, GA 30309

EXAMINER

VIDWAN, JASJIT S

ART UNIT	PAPER NUMBER
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2182

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/661,723	DATTA ROY ET AL.	
	Examiner	Art Unit	
	Jasjit S. Vidwan	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group 1 in the reply filed on 10/26/2006 is acknowledged.
2. Claims 1-21 are pending.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
4. ***Claim 1 is rejected under 35 U.S.C. 112***, second paragraph, as being indefinite for failing to particularly point out and distinctly claims the subject matter which applicant regards as the invention. Applicant claims, "...determining *whether* the IDE drive is connection." However, it is unclear to the Examiner what the result might be in condition where the IDE drive is *not* connected.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility.

Applicant claims "based on a value read from the status register destination, determining whether the IDE drive is connection." However, the claim as recited in present condition fails to have any practical usage based on the fact that all that the claim does is simply determines whether a device is connected.

Claims 14-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 14-18 claim a "computer readable medium" which in Applicant's submitted specification on Page 5 defines as "data structures, program modules or other data in a modulated data signal such as a carrier wave or other transport mechanism and includes any information delivery media. The term "modulated data signal" means a signal that has one or more of its characteristics set or changed in such a manner as to encode information in the signal." The claims

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covers an embodiment that fails to include patent eligible subject matter since signals, wave and other forms of energy are deemed to fall under a non-statutory category of invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartung et al, U.S. Patent No: 5,920,709 [**herein after Hartung**].

8. **As per Claim 1**, Hartung teaches a method for detecting whether an IDE drive [**see Fig. 13, element 40 – also see Col. 1, Lines 41-44, "IDE devices such a magnetic tape drives and hard drives"**] is connected to an drive electronics channel within a computer [**see Fig. 6, element 60D**], comprising:

(a) Reading a status register [**see Col. 9 Line 64 – Col. 10, Line 5**] destination for the IDE drive [**Col. 1, Lines 49-55**]

(b) Based on a value read from the status register destination, determining whether the IDE drive is connected [**Col. 11, Lines 48-52**].

9. **As per Claim 14**, Hartung teaches a computer program product having control logic stored therein for causing a computer to detect whether an IDE drive [**see Fig. 13, element 40 – also see Col. 1, Lines 41-44, "IDE devices such a magnetic tape drives and hard drives"**] is connected to an intelligent drive electronics channel within the computer [**see Fig. 6, element 60D**], said control logic comprising means for causing the computer to:

(a) Read status register [**see Col. 9 Line 64 – Col. 10, Line 5**] destination for the IDE drive [**Col. 1, Lines 49-55**]

(b) Detect whether the data read from the status register destination has a first predefined value **[see Col. 11, Lines 42-45 – whether registers have a string of hexadecimal “F” values]**

(c) Upon the data read from the status register destination not having the first predefined value, return a first indication that an IDE drive is connected to the intelligent drive electronics channel **[Col. 11, Lines 48-52]**

10. **As per Claim 19**, Hartung teaches a computer system for detecting whether an IDE drive **[see Fig. 13, element 40 – also see Col. 1, Lines 41-44, “IDE devices such a magnetic tape drives and hard drives”]** is connected to an intelligent drive electronics channel within the computer system **[see Fig. 6, element 60D]**, the computer system comprising:

(a) Processor **[see Fig. 6, element 62, “Main System Microprocessor”]** coupled to a memory **[see Fig. 6, element 67, “RAM” – as can be seen, element 62 is coupled to 67]**

(b) At least one bus **[see Fig. 6, element 66]** coupled to the processor and capable of hosting at least one IDE drive via an intelligent drive electronics channel **[see elements 60A-60D, either directly or indirectly (through ISA Bus), four IDE bus are connected to Main System Microprocessor (62)]**

(c) Basic input/output system program capable of being executed on the processor and when executed on the processor **[see Col. 10, Lines 6-13]** operative to:

(i) Read a status register **[see Col. 9 Line 64 – Col. 10, Line 5]** destination from the IDE drive **[Col. 1, Lines 49-55]**

(ii) Detect whether data read from the status register destination has a first predefined value **[see Col. 11, Lines 42-45 – whether registers have a string of hexadecimal “F” values]**

(iii) Upon data read from the status register destination not having the first predefined value, return a first indication that an IDE drive is connected to the intelligent drive electronics **[Col. 11, Lines 48-52]**

11. **As per Claim 2**, Hartung teaches a method wherein determining whether the IDE drive is connected comprises:

(a) Detecting whether data read from the status register destination has a first predefined value **[see Col. 11, Lines 42-45 – whether registers have a string of hexadecimal “F” values]**

(b) Upon the data read from the status register destination not having the first predefined value, returning that the IDE drive is connected to the intelligent drive electronic channel **[Col. 11, Lines 48-52]**

12. **As per Claim 3**, Hartung teaches a method wherein prior to reading the status register destination, further comprising:

(a) Writing data to a drive head register destination for the IDE drive **[Col. 1, Lines 55-60, -- All Information regarding the IDE drive is written into the registers]**

(b) Reading the drive head register destination and detecting whether the data read from the drive head register destination matches the data written to the drive head register destination **[Col. 11, Lines 37-42]**

(c) In response to the data read from the drive head register destination not matching the data written to the drive head register destination, returning that the IDE drive is not connected to an intelligent drive electronics channel **[see Col. 11, Lines 42-45 – whether registers have a string of hexadecimal “F” values and if it doesn’t, concluding that the IDE device is not connected]**

(d) In response to the data read from the drive head register destination matching the data written to the drive head register destination, reading the status register destination **[Col. 11, Lines 48-52]**

13. **As per Claim 4**, Hartung teaches a method further comprising:

(a) Prior to writing data to a drive head register destination for the IDE drive, establishing a drive selection value for each IDE drive **[Col. 10, Lines 59-66]**

(b) Selecting the IDE drive for detection by writing a drive selection value to the drive head register destination [Col. 12, Lines 48-55]

14. **As per Claim 9**, Hartung teaches a method wherein two IDE drives may be connected per intelligent drive electronics channel and wherein a one of the IDE drives comprises a master drive and a one of the IDE drives comprises a slave drive [Col. 5, Lines 11-18]

15. **As per Claim 10**, Hartung teaches a method wherein the drive selection value represents at least one of master drive and the slave drive [see Col. 5, Lines 25-30]

16. **As per Claim 11**, Hartung teaches a method further comprising, prior to reading a status register destination, resetting the computer [Col. 6, Lines 6-13]

17. **As per Claim 12**, Hartung teaches a method wherein resetting the computer comprises executing at least one of the following: Power on reset of the computer; hardware reset; execute drive diagnostics command; software reset and drive reset [Col. 6, Lines 25-28, "Perform Device Diagnostic" – *Though Hartung teaches other limitations as well, the claim only requires "at least one" of the list*]

18. **As per Claim 13**, Hartung teaches a method wherein the IDE drive comprises at least one of the following: hard disk drive, floppy drive, CD ROM disk drive and tape drive [see Fig. 13, element 40 – also see Col. 1, Lines 41-44, "IDE devices such a magnetic tape drives and hard drives"]

19. **As per Claims 15 & 20**, Hartung teaches a computer program product further comprising computer readable code means for causing the computer to:

(a) Establish a drive selection value for each IDE drive wherein each IDE drive comprises at least one of a master IDE device and a slave IDE device [see Col. 5, Lines 25-30]

(b) Further limitations of the present claim were previously addressed in rejection of Claim 3.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 5, 6, 7, 8, 16, 17, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartung and further in view of Nakamura U.S. Patent No: 7,046,519 [**herein after Nakamura**].

22. ***As per Claims 5, 16 and 21***, Hartung teaches all the limitations of Claims 2, 14 and 19. Hartung fails to teach a system wherein the system uses cylinder low register destination and cylinder high register destination for the IDE drive. Nakamura teaches the above limitation of having a cylinder low register and cylinder high register and comparing the two to determine whether a predefined value exists [**see Col. 8, Lines 52-64**].

One of ordinary skill in the art at the time of Applicant's invention would have been motivated to combine the teachings of Hartung with that of Nakamura in order to take advantage of exchanging data between the small communication card and the personal computer using the register group used in a PC card interface [**Col. 9, Lines 45-50**]

23. ***As per Claim 6 and 17***, Hartung as modified by Nakamura teaches a system wherein the IDE drive is connected to the intelligent drive electronics channel implements a packet command feature set [**see Fig. 6, element 60D**]

24. ***As per Claim 7***, Hartung as modified by Nakamura teaches a system wherein in response to the data read from cylinder low register destination and the cylinder high register destination not matching the predefined signature, returning the IDE drive is not connected to an intelligent drive electronic channel [**see Col. 11, Lines 42-45 – whether registers have a string of hexadecimal "F" values and if it doesn't, concluding that the IDE device is not connected**]

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25. **As per Claim 8 and 18**, Hartung as modified by Nakamura teaches a method wherein the predefined signature comprises a second predefined value of the cylinder high register destination and a third predefined value of the cylinder low register destination [Col. 8, Lines 52-64].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasjit S. Vidwan whose telephone number is (571) 272-7936. The examiner can normally be reached on 8am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KIM HUYNH can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSV
1/3/07


KIM HUYNH
SUPERVISORY PATENT EXAMINER

1/5/07